

ABSTRACT

[0028] A method for forming a dual damascene interconnect structure provides an intermetal dielectric that includes a spin-on low-k dielectric material formed over a CVD low-k dielectric material. A via opening is formed by etching through the spin-on 5 low-k dielectric material and the CVD low-k dielectric material and a plug material is introduced to fill the via opening. A highly selective trench etching operation etches a trench in the upper, spin-on low-k dielectric material and removes the plug material from the via without attacking the lower CVD low-k dielectric material to form the dual 10 damascene opening which is then filled with a conductive interconnect material.. The intermetal dielectric formed of multiple low-k dielectric layers provides advantageous electrical and mechanical properties.